

What is claimed is:

- 1 1. A method for conducting searches on a terminal coupled to a network,
2 the terminal including a display for rendering pages from the network, the
3 method comprising:
 - 4 identifying a plurality of network addresses, each of the network
5 addresses locating a corresponding page that matches a search criteria;
 - 6 arranging the corresponding page for each of the network addresses
7 according to a sequence, the sequence providing that the corresponding page for
8 at least one of the network addresses is followed by a subsequent page for
9 another network address in the plurality of network addresses;
 - 10 rendering the corresponding page for at least one of the network
11 addresses on the display; and
 - 12 signaling the subsequent page to be rendered on the display while the
13 corresponding page for at least one of the network addresses is rendered on the
14 display.
- 1 2. The method of claim 1, wherein signaling the subsequent page to be
2 rendered includes automatically rendering the subsequent page after the
3 corresponding page for at least one of the network addresses is rendered.
- 1 3. The method of claim 1, wherein signaling the subsequent page to be
2 rendered is responsive to receiving a user-input while the corresponding page
3 for at least one of the network addresses is rendered.
- 1 4. The method of claim 1, wherein the sequence is affected by relevance
2 of the corresponding pages to the search criteria.

1 5. The method of claim 1, wherein the subsequent page is rendered on the
2 display so that a transition from a previous page appears to be animated.

1 6. A method for conducting searches on a network, the method comprising:
2 signaling a search request over the network to a search engine;
3 receiving a search result that identifies a plurality of network addresses;
4 and
5 automatically rendering multiple pages located by network addresses in
6 the search result.

1 7. The method of claim 6, wherein automatically rendering multiple
2 network pages includes displaying each of the multiple pages according to a
3 sequence.

1 8. The method of claim 7, wherein the sequence indicates a measure of
2 relevance between the page located by each of the network addresses and the
3 search request.

1 9. The method of claim 7, wherein the sequence is predetermined.

1 10. The method of claim 6, wherein automatically rendering multiple
2 network pages includes displaying each of the multiple pages according to a
3 sequence determined by the search engine.

1 11. A method for conducting searches on a network, the method comprising:
2 signaling a search request over the network to a plurality of search
3 engines;

4 receiving a plurality of search results, each of the plurality of search
5 results being signaled from one of the search engines, each search result
6 identifying a plurality of network addresses;
7 sorting the search results from the plurality of search engines; and
8 automatically rendering multiple pages located by network addresses in
9 each of the search results.

1 12. The method of claim 11, wherein sorting the search result includes
2 selecting an order for the search results based on a preference of a user.

1 13. The method of claim 11, wherein sorting the search results includes
2 ordering the network addresses in the search result by mixing network addresses
3 from each search result with network addresses from the other search results in
4 the plurality of search results.

1 14. A method for conducting searches over a network, the method
2 comprising:
3 signaling a search request to a search engine;
4 receiving a search result that identifies a plurality of network addresses;
5 displaying a first page from a first network address in the plurality of
6 network addresses; and
7 automatically displaying at least a subsequent page from a second
8 network address in the plurality of network addresses.

1 15. The method of claim 14, further comprising automatically
2 displaying a plurality of subsequent pages in a sequence, each subsequent page

3 being from a corresponding network address in the plurality of network
4 addresses.

1 16. The method of claim 15, wherein displaying a plurality of subsequent
2 pages in a sequence includes displaying each of the plurality of subsequent
3 pages for a duration before automatically displaying a next page in the plurality
4 of subsequent pages.

1 17. The method of claim 14, wherein automatically displaying at least a
2 subsequent page includes displaying the subsequent page with the subsequent
3 page without the first page.

1 18. The method of claim 17, further comprising automatically displaying a
2 plurality of subsequent pages in a sequence, each subsequent page being from a
3 corresponding network address in the plurality of network addresses, and each
4 subsequent page being displayed replacing a previously displayed page from
5 one of the plurality of network addresses.

1 19. A method for conducting searches over a network, the method
2 comprising:

3 locating a plurality of network addresses in response to a search request
4 from a user;

5 displaying a user-interface;

6 displaying a first page located by a first network address;

7 receiving a signal from the user interacting with the user-interface while
8 the first page is displayed; and

9 displaying a second page in response to receiving the command.

1 20. The method of claim 19, wherein displaying a user-interface includes
2 displaying a plurality of selectable controls, including a first feature for enabling
3 the user to select a next page from the plurality of network pages.

1 21. The method of claim 20, further comprising displaying a second feature
2 enabling the user to select a previous page that was already displayed.

1 22. A method for conducting searches on a terminal coupled to a network,
2 the terminal including a display for viewing pages, the method comprising:

3 signaling a search request over the network to a search engine;
4 receiving a search result that identifies a plurality of network addresses,
5 the plurality of network addresses including a first network address and a
6 second network address;

7 rendering a first page from the first network address on the display;
8 caching a second page from the second network address while the first
9 page is being rendered; and

10 automatically rendering the second page on the display after caching the
11 first page.

1 23. The method of claim 22, further comprising automatically rendering the
2 first page from the first network address on the display.

1 24. The method of claim 22, wherein rendering the second page after
2 caching the first page includes replacing the first page with the second page on
3 the display after a duration has elapsed.

1 25. The method of claim 22, further comprising caching a plurality of
2 subsequent pages while the first page or the second page is being displayed.

1 26. The method of claim 25, further comprising displaying each of the
2 subsequent pages after the subsequent pages are cached.

1 27. The method of claim 25, further comprising displaying the subsequent
2 pages automatically and sequentially after the subsequent pages are cached, so
3 that each subsequent page is rendered on the display without another subsequent
4 page being rendered.

1 28. A method for conducting searches over a network, the method
2 comprising:

3 signaling a search request over the network to a search engine;
4 receiving a search result that identifies a plurality of network addresses;
5 for each network address in the plurality of network addresses, verifying
6 that each network address locates a corresponding page; and
7 signaling a browser only the network addresses that are verified as
8 locating corresponding network pages so as to automatically render at least one
9 of the corresponding pages.

1 29. The method of claim 28, further comprising automatically rendering
2 only the corresponding pages of the verified network addresses.

1 30. A method for conducting searches over a network, the method
2 comprising:

3 signaling a search request over the network to a search engine;

4 receiving a search result that identifies a plurality of network addresses;
5 determining a set of network addresses in the plurality of network
6 addresses that are selectable to render corresponding pages; and
7 automatically rendering the corresponding pages from network
8 addresses in the set of network pages.

1 31. The method of claim 30, further comprising caching each the network
2 addresses in the set of network addresses before rendering a corresponding page
3 for that network address.

1 32. The method of claim 31, including caching at least one of the network
2 addresses while displaying another one of the network addresses in the set of
3 network addresses.

1 33. The method of claim 32, wherein determining a set of network addresses
2 that are selectable includes excluding any network address in the plurality of
3 network addresses that is broken or unavailable.

1 34. A system for conducting searches over a network, the system
2 comprising:

3 a browser that renders a page located by a network address;
4 a search module coupelable to a search engine to signal the search
5 engine a search request, and to receive a search result in response to signaling
6 the search request, the search module signaling a plurality of network addresses
7 in the search result to the browser so that each of the plurality of network
8 addresses is rendered automatically by the browser.

1 35. The system of claim 34, wherein the search module signals the plurality
2 of network addresses so that each of the plurality of addresses is rendered
3 sequentially.

1 36. A system for conducting searches over a network, the system
2 comprising:

3 a browser that renders a page located by a network address;
4 a search module coupelable to a search engine to signal the search
5 engine a search request, and to receive a search result in response to signaling
6 the search request, the search result comprising a plurality of network addresses
7 from the search result to the browser; and
8 a user-interface including a first feature that is selectable while the
9 browser is displaying a first page from a first network address in the search
10 result to cause the browser to render a second page from a second network
11 address in the search result.

1 37. The system of claim 36, wherein the search module automatically
2 signals the first network address to the browser to cause the browser to
3 automatically display the first page.

1 38. The system of claim 37, wherein the first feature is selectable to cause a
2 plurality of subsequent network addresses in the search result to be signaled to
3 the browser.

1 39. The system of claim 38, wherein the plurality of subsequent network
2 addresses are signaled to the browser so that the browser sequentially displays a
3 page for each of the plurality of subsequent network addresses.

1 40. The system of claim 39, wherein the browser sequentially replaces a
2 previous page of a previous network address in the search result with a page of
3 a subsequent network address in the search result.

1 41. The system of claim 36, wherein the user-interface includes a second
2 feature that is selectable to cause a browser to display a previously displayed
3 page of a previous network address in the plurality of network addresses.

1 42. A system for conducting searches over a network, the system
2 comprising:

3 a browser that renders a page located by a network address;
4 a search module coupelable to a search engine to signal the search
5 engine a search request, and to receive a search result in response to signaling
6 the search request, the search result comprising a plurality of network addresses,
7 the search module signaling the plurality of network addresses to the browser so
8 that each of the plurality of network addresses is rendered; and
9 a caching module that automatically caches a page of a subsequent
10 network address in the search result while a page corresponding to another one
11 of the plurality of network addresses is displayed.

1 43. The system of claim 42, wherein the search module causes the browser
2 module to automatically render the page located by each one of the plurality of
3 network addresses.

1 44. The system of claim 42, further comprising a user-interface including a
2 first feature that is selectable to cause the browser module to render a
3 subsequent page of a subsequent network address in the plurality of network
4 addresses while displaying a previous page from another network address in the
5 plurality of network addresses.

1 45. The system of claim 44, wherein the first feature is selectable to cause
2 the search module to signal the browser the subsequent network page.

1 46. A system for conducting searches over a network, the system
2 comprising:
3 a browser that renders a page located by a network address;
4 a search module coupelable to a search engine to signal the search
5 engine a search request, and to receive a search result in response to signaling
6 the search request, the search result comprising a plurality of network addresses,
7 the search module signaling the plurality of network addresses to the browser so
8 that each of the plurality of network addresses is rendered; and
9 a verification module that identifies whether at least some of the
10 plurality of network addresses locate corresponding pages.

1 47. The system of claim 46, wherein the verification module loads each of
2 the plurality of network addresses into the browser to determine if each of the
3 network addresses locate a corresponding page.

1 48. The system of claim 47, wherein the browser is coupleable to the
2 verification module to be signaled only the network addresses in the plurality of
3 network addresses that are verified to locate the corresponding pages.

1 49. The system of claim 46, further comprising a caching module that
2 automatically caches a page of a subsequent network address in the search result
3 while a page corresponding to another one of the plurality of network addresses
4 is displayed.

GCG CGA ACT GGT GAA TAT AGT GGC TAC GAC ACG AGT GGT GTG GAG CTC
 A R T G E Y S G D T S G V E L>
 _____a____a____a____a____TRANSLATION OF 27C1 VH. SEQ [A]____a____a____>

 340 350 * * * *
 * * * * * *
 TGG GGG CAA CGG ACC ACG GTC ACC GTC TCC TCA (SEQ ID NO:11)
 W G Q G T V T V S S> (SEQ ID NO:12)
 _____a____TRANSLATION OF 27C1 VH. SEQ [A]____a____>

Figure 2 Sequences of antibodies specific for TGFbeta2

(a) Antibodies to *Terbeta 2* isolated directly from repertoires

FIG 2.(a) (i) 2A-II1 VII (also known as 6II1 VII)

Sequence Range: 1 to 345

FIG 2.(a)(ii) 2A-Λ9 (also known as 11E6 VII)

GCT ATG CAC TGG GTC CGC CAG GCT CCA GCC AAG GCG CTG GAG TGG GTG
 A M H W V R Q A P A K G L E W V >
a a a TRANSLATION OF 11E6 VH . SEQ [A] _ a _ a _ a _ a _ >
 * 150 * * 160 * * 170 * * 180 * * 190 * *
 GCA GTT ATA TCA TAT GAT CGA AGC AAT AAA TAC GCA GAC TCC GTG
 A V I S Y D G S N K Y Y A D S V >
a a a a TRANSLATION OF 11E6 VH . SEQ [A] _ a _ a _ a _ a _ >
 200 210 220 * * 230 * * 240 * *
 * * * * * * * * * *
 AAG GGC CGA TTC ACC ATC TCC AGA GAC AAT TCC AGG AAC ACG CTG TAT
 K G R F T I S R D N S K N T L Y >
a a a a TRANSLATION OF 11E6 VH . SEQ [A] _ a _ a _ a _ a _ >
 * 250 * * 260 * * 270 * * 280 * *
 CTG CAA ATG AAC AGC CTG AGA GCT GAG GAC ACG GCC GTG TAT TAC TGT
 L Q M N S L R A E D T A V Y Y C >
a a a a TRANSLATION OF 11E6 VH . SEQ [A] _ a _ a _ a _ a _ >
 290 * * 300 * * 310 * * 320 * * 330 * *
 GCA AGA GCG GGG TTG GAA ACG ACG TGG GGC CAA CGA ACC CTG GTC ACC
 A R A G L E T W G Q G T L V T >
a a a a TRANSLATION OF 11E6 VH . SEQ [A] _ a _ a _ a _ a _ >
 340 * * 350 * *
 GTC TCC TCA AGT GG (SEQ ID NO:36)
 V S S S G > (SEQ ID NO:37)
a a a a TRANSLATION _ a _ >

FIG 2.(a)(iii) Gold11-VII

Sequence Range: 1 to 369

FIG 2.(a)(iv) Gold11-VL

Sequence Range: 1 to 381

FIG 2.(a)(v)

*	*	*	*	*	*	*	*	*	*	*	*	*	*
TCC	GTG	AAAG	GTT	TCC	TGT	AAAG	GCG	TCT	GGA	TAC	ACC	TTC	AGC
S	V	K	V	S	C	K	A	S	G	Y	T	F	T
—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—>
100		110		120		130		140					
*	*	*	*	*	*	*	*	*	*	*	*	*	*
TAT	ATG	AAAC	TGG	GTG	CGA	CAG	GCC	CCC	GGA	CAA	GGG	CTT	GAG
Y	M	N	W	V	V	R	Q	A	P	G	Q	G	L
—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—>
150		160		170		180		190					
*	*	*	*	*	*	*	*	*	*	*	*	*	*
GGA	ATA	ATC	AGC	CCT	CGT	GGT	ACG	ACA	AGT	TAC	GCA	CAG	AAC
G	I	I	S	P	R	G	T	T	S	Y	A	Q	N
—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—>
200		210		220		230		240					
*	*	*	*	*	*	*	*	*	*	*	*	*	*
CAG	GCG	AGA	GTC	ACC	ATG	ACC	AGG	GAC	ACG	TCC	ACA	AGC	TAC
Q	G	R	V	T	M	T	R	D	T	S	T	S	T
—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—>
250		260		270		280							
*	*	*	*	*	*	*	*	*	*	*	*	*	*
ATG	GAG	CTG	AGC	AGC	CTG	AGA	TCT	GAG	GAC	ACG	GCC	GTC	TAT
M	E	L	S	S	L	R	S	E	D	T	A	V	Y
—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—>
290		300		310		320		330					
*	*	*	*	*	*	*	*	*	*	*	*	*	*
GCG	ATA	ATT	GGG	GGT	ACT	ACT	ATG	AGA	GTA	GGG	GGG	CCC	GAT
A	I	I	G	G	T	T	M	R	V	G	G	P	D
—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—	—a—>
340		350		360		370		380					

FIG 2.(a)(vi)

Sequence Range: 1 to 381

Figure 2(b) (i)

GAT	GTT	GTG	ATG	ACT	CAG	TCT	CCA	TCC	CTG	TCT	GCA	TCT	GTA	GGA		
D	V	V	M	T	Q	S	P	S	S	A	S	V	G	>		
50	60				70			80			90					
GAC	AGA	GTC	ACC	ATC	ACT	TGC	CGG	GCC	AGT	CAG	GGC	ATT	AGC	AAT	TAT	
D	R	V	T	I	T	C	R	A	S	Q	G	I	S	N	Y	>
100	110				120			130			140					
TTA	GCC	TGG	TAT	CAG	CAA	AAA	CCA	GGG	AAA	GCC	CCT	AAG	CTC	CTG	ATC	
L	A	W	Y	Q	Q	K	P	G	K	A	P	K	L	L	I	>
150	160				170			180			190					
TAT	AAG	GCA	TCT	ACT	TTA	GAA	AGT	GGG	GTC	CCA	TCA	AGG	TTC	AGT	GCG	
Y	K	A	S	T	L	E	S	G	V	P	S	R	F	S	G	>
200	210				220			230			240					
AGT	GGA	TCT	GGG	ACA	GAA	TTC	ACT	CTC	ACA	ATC	AGC	AGT	CTG	CAA	CCT	
S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P	>
250	260				270			280								
GAA	GAT	TTT	GCA	ACT	TAC	TAC	TGT	CAG	AGT	TAC	AGT	ACC	CCT	CGA		
E	D	F	A	T	Y	Y	C	Q	Q	S	Y	S	T	P	R	>
290	300				310			320			330					
ACG	TTC	GGC	CAA	GGG	ACC	AAA	GTG	GAT	ATC	AAA	CGT	(SEQ ID NO:38)				
T	F	G	Q	G	T	K	V	D	I	K	R	(SEQ ID NO:39)				

Figure 2 (b) (ii)

TCG	TCT	GAG	CTG	ACT	CAG	GAC	CCT	GCT	GTC	TCT	GTC	GCA	CAG	
S	S	E	L	T	Q	D	P	A	V	S	V	A	L	Q>
50		60			70			80						
T	V	GTC	AGG	ATC	ACA	TGC	CMA	GGA	GAC	AGC	CTC	AGA	AGC	90
R	I	T	C	Q	G	D	S	L	R	S	Y	Y	A>	
100		110			120			130						
S	W	Y	Q	Q	P	G	Q	A	P	V	L	V	I	Y>
150		160			170			180						
GGT	AAA	AAC	AAC	CGG	CCC	TCA	GGG	ATC	CCA	GAC	CGA	TTC	GCT	190
G	K	N	N	R	P	S	G	I	P	D	R	F	A	S>
200		210			220			230						
AAC	TCA	GGA	AAC	ACA	GCT	TCC	TTG	ACC	ATC	ACT	GGG	GCT	CAG	240
N	S	G	N	T	A	S	L	T	I	T	G	A	Q	E>
250		260			270			280						
GAT	GAG	GCT	GAC	TAT	TAC	TGT	AGC	TCC	CGG	GAC	AGC	AGT	GGT	CAT
D	E	A	D	Y	Y	C	S	S	R	D	S	S	G	N>H>
290		300			310			320						
V	V	TTC	GGC	GGA	GGG	ACC	ANG	CTG	ACC	GTC	CTA	GGT	(SEQ ID NO:40)	
F	G	G	G	T	K	L	T	V	L	V	L	G>	(SEQ ID NO:41)	

Figure 2(b) (iii)

TCG	TCT	GAG	CTG	ACT	CAG	GAC	CCT	GCT	GTC	GTC	GCC	TTG	GGA	CAG	
S	S	E	L	T	Q	D	P	A	V	S	V	A	L	G	
50	60	70	80	90											
ACA	GTC	AGG	ATC	ACA	TGC	CAA	GGA	GAC	AGC	CTC	AGA	AGC	TAT	TAT	GCA
T	V	R	I	T	C	Q	G	D	S	L	R	S	Y	Y	A>
100	110	120	130	140											
AGC	TGG	TAC	CAG	CAC	AGC	CCN	GGA	CAG	GCC	CCT	GTA	CCT	GTC	ATC	TAT
S	W	Y	Q	Q	K	P	G	Q	A	P	V	L	V	I	Y>
150	160	170	180	190											
GGT	AAA	AAC	AAC	CGG	CCC	TCA	GGG	ATC	CCA	GAC	CGA	TCT	TTC	GGC	TCC
G	K	N	N	R	P	S	G	I	P	D	R	F	S	G	S>
200	210	220	230	240											
AGC	TCA	GGA	AAC	ACA	GCT	TCC	TTG	AGC	ATC	ACT	GGG	GCT	CAG	GCG	TCC
S	S	G	N	T	A	S	L	T	I	T	G	A	Q	A	E>
250	260	270	280												
GAT	GAG	GCT	GAC	TAT	TAC	TGT	MAC	TCC	CGG	GAC	AGC	AGT	AGT	ACC	CAT
D	E	A	D	Y	Y	C	N	S	R	D	S	S	T	H>	
290	300	310	320	330											
CGA	GGG	GGG	GGC	GGC	GGG	ACC	AGG	CTG	ACC	GTC	CTA	GCT	(SEQ ID NO:42)		
R	G	V	F	G	G	T	K	L	T	V	L	G	(SEQ ID NO:43)		

Figure 2 (b) (iv)

GAA	GTT	GTC	CTG	ACT	CAG	TCT	CCA	TCC	CTG	TCT	GCA	TCT	GTA	GGA
E	V	V	L	T	Q	S	P	S	L	S	A	S	V	G>
50	60	70	80	90										
GAC	AGA	GTC	ACC	ATC	ACT	TGC	CGG	GCA	AGT	CAG	GGC	ATT	GGA	GAT
D	R	V	T	I	T	C	R	A	S	Q	G	I	G	D
100	110	120	130	140										
TTG	GGC	TGG	TAT	CAG	CAG	ANG	CCA	GGG	AAA	GCC	CCT	ATC	CTC	CTG
L	G	W	Y	Q	Q	K	P	G	K	A	P	I	L	I>
150	160	170	180	190										
TAT	GGT	ACA	TCC	ACT	TTA	CAA	AGT	GGG	GTC	CCG	TCA	AGG	TTC	AGC
Y	G	T	S	T	L	Q	S	G	V	P	S	R	F	S
200	210	220	230	240										
AGT	GGA	TCT	GGC	ACA	GAT	TTC	ACT	CTC	ACC	ATC	AAC	CTG	CAG	CCT
S	G	S	G	T	D	F	T	L	T	I	N	S	L	Q
250	260	270	280											
GAA	GAT	TTT	GCA	ACT	TAT	TAC	TGT	CTA	CAA	GAT	TCC	AAT	TAC	CGG
E	D	F	A	T	Y	Y	C	L	Q	D	S	N	Y	P
290	300	310	320											
ACT	TTC	GGC	GGA	GGG	ACA	CGA	CTG	GAG	ATT	AAA	CGT	(SEQ ID NO:44)		
T	F	G	G	G	T	R	L	E	I	K	R	(SEQ ID NO:45)		

Figure 2 (b) (v)

TCG	TCT	GAG	CTG	ACT	CAG	GAC	CCT	GCT	GTC	TCT	GCC	TTG	GGA	CAG
S	S	E	L	T	Q	D	P	A	V	S	V	A	L	G
50	60	70	80	90										
ACA	GTC	AGG	ATC	ACA	TGC	CMA	GGA	GAC	AGC	CTC	AGA	AAC	TAT	TAT
T	V	R	I	T	C	Q	G	D	S	L	R	N	Y	Y
100	110	120	130	140										
AAC	TGG	TAC	CAG	CAG	ANG	CCA	GGA	CAG	GCC	CCT	GTA	CTT	GTC	ATC
N	W	Y	Q	Q	K	P	G	Q	A	P	V	L	V	I
150	160	170	180	190										
GGT	AAA	AAC	AAC	CGG	CCC	TCA	GGG	ATC	CCA	GAC	CGA	TTC	TCT	GTC
G	K	N	N	R	P	S	G	I	P	D	R	F	S	S
200	210	220	230	240										
AGC	TCA	GGG	AAC	AAC	GCT	TCC	TTG	ATC	ACT	GGG	GCT	CGG	GCG	TCC
S	S	G	N	T	A	S	L	T	I	A	R	A	E	
250	260	270	280											
GAT	GAG	GGT	GTC	TAT	TAC	TGT	AAC	TCC	CGG	GAC	AGT	GGT	GCG	GTT
D	E	G	V	Y	Y	C	N	S	R	D	S	S	G	V
290	300	310	320											
TTC	GGC	GGG	GGG	ACC	AAA	CTG	ACC	GTC	CTA	GGT	(SEQ ID NO:46)			
F	G	G	G	T	K	L	T	V	L	G	(SEQ ID NO:47)			

FIG. 2(b)(vi)

Sequence Range: 1 to 324

(SEQ ID NOS: 19-35)

PARENT (1-B2)	A R T G E Y S G Y D S S S G V D V W
27-C1	A R T G E Y S G Y D T S G V E L W
27-D7	A R T R E Y S G H D S S S G V D D W
27-E10	A R T G P F S G Y D S S S G E D V R
27-H1	A R T E E Y S G Y D S S S G V D V W
27-E2	A Q T R E Y T G Y D S S S G V D V W
28-A11	A R T E E Y S G F D S T G E D V W
28-E12	A R T E E F S G Y D S S S G V D V W
28-H10	A R T G E Y S G Y H S S S G V D V R
31-G2	A R T E E F S G Y D S S S G V D V W
30-B6	A R A G P F S G Y D S S S G E D V R
30-E9	A R T G P F S G Y D S S S G E D V W
30-F6	A R T E E F S G Y D S S S G V D V W
30-D2	A R T G E Y S G Y D S S S G E L V W
31-A2	A R T E E F S G Y D S T G E E V W
31-E11	A R T E E F S G Y D S S S G V D V W
31-F1	A R T G E Y S G Y D S S S G E D V W

FIGURE 3

Figure 4

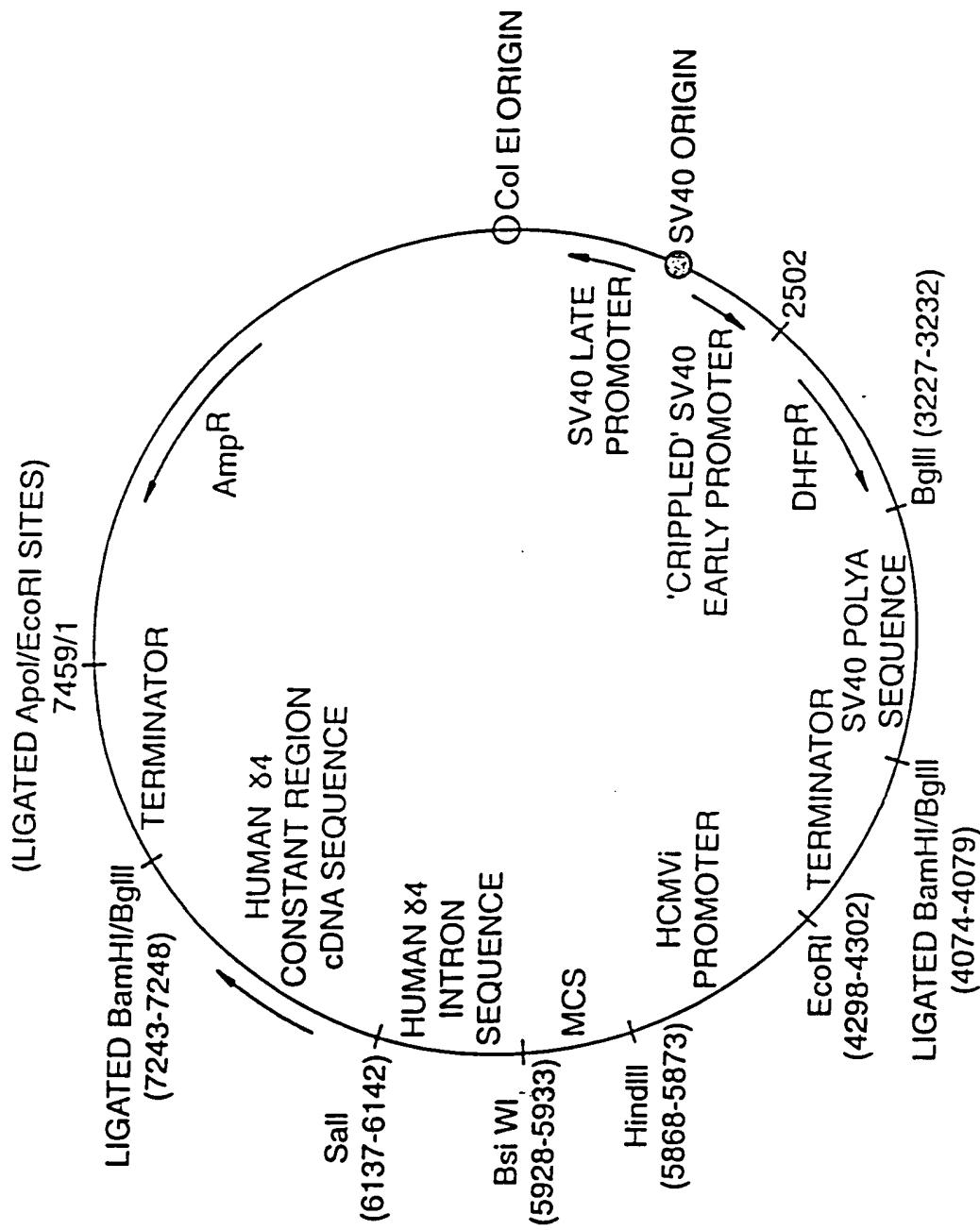
10 TCG TCT GAG CTC ATC CAG GAC CCT GCT 30 GTC TCT GTC GCC TAC CGA CAG
 S S E L T Q D P A V S V A L G Q>
 50 ACA GTT AGG ATC ATC TCC CAG GAG AGT 80 CTC AGA AGC TAT TAC ACA
 T V R I T S Q G D S L R S Y Y T>
 100 AAC TGG TTT CAG CAG AGC CCA GCA CAG CCC CCT CTA CTT GTC GTC TAT
 N W F Q K P G Q P P L L V V Y>
 150 GCT AAA ATG AGG CCC TCA GGG ATC CCA GAC CGA TTC TCT GGC TCC
 A K N K R P S G I P D R F S G S>
 200 AGC TCA GCA AAC GCT TCC TAC ACC ATC ACT GCT CAG GCG 190
 S S G N T A S L T I T G A Q A E>
 250 GAT GAG GCT GAC TAT TAC TGT CAT TCC CGG GAC AGT GGT AAC CAT
 D E A D Y C H S R D S S G N H>
 290 GTC CTT TTC GGC CGA CGG AGC CTC ACC GTC CTA GTC (SEQ ID NO:48)
 V L F G G T K L T V L G (SEQ ID NO:49)

(SEQ ID NOS: 50-52)

H
i
n
d
I
I
I (SEQ ID NO:50)---
 1 aagcttgcgcaccatggactggaccctggcggtgttttgcctgcgcgtggccct
 ttcggacggcggtggtacccctggaccctggaccggcgccacaaaacggacggacggcaccgggg
 2 K L A A T H D W T H R V F C L L A V A P -
 (SEQ ID NO:51)---
 S P B
 f s s
 i t t
 I I I
 61 gggggcccaacggccagggtgcacactggcaggcgtccgggtgcacgggaccacggtcacccgtct
 ccccccgggtgcgggtccacgggtcgatggccacgggttcctgggtgcacggca
 2 G A H S Q V Q L Q Q S G A K G P R S P S -
 B E
 a C
 = O
 H R
 I I
 121 ctcaggtaggtggatccggattc
 gtagtccactcacctaggatgg
 --- (SEQ ID NO:52)
 2 P Q V S G S E F -

FIGURE 5

Fig. 6.



(SEQ ID NOS: 53-57)

H
i
n
d
I
I
I (SEQ ID NO:53) ---
1 a a g c t t c g c c a c c a t g g g a t g g a g c t g t a t c a t c c t c t t c t t g g t a g c a a c a g c t a c a g g
60 t t c g a a q c q g t g g t a c c c t a c c t c g a c a t a g t a g g a g a g i a c c a t c g t t c c g a t g t c c
(SEQ ID NO:54) M G H S C I I L F L V A T A T
61 t t a g g g g c t c a c a g t a g c a g g c t t g a g g t c t g g a c a t a t a t a t g g g t g a c a a t g a c a t c c
120 a t t c c c c g a g t g t c a t c g t c c g a c t c c a g a c c a g t a t a t a t a c c c a c t g t t a c t g t a g g
A
P
a
L
I
act t t g c c t t t c t c c a c a g g t g c a c t c c a c t t g a g g c t c a c c a g g t c t c c a g a c a
180 t c a a a c g g a a a g a g g g t g t c c a c a c g t g a g g c t g t a a c t c g a g t g g g t c a g a g g t c t g t
(SEQ ID NO:55) G V H S D I E L
X
h
o
I
a a c t c g a g c t g a a a c g t g a g t g a a t t a a a c t c t g c t t c c a a t t g g a t c c
181 t t c g a g c t c g a c t t t g c a c t c a t t t a a t t g a a a c g a a g g a g t t a a c t t a g g
234 t t c g a g c t c g a c t t t g c a c t c a t t t a a t t g a a a c g a a g g a g t t a a c t t a g g
--- (SEQ ID NO:57)
NO:56) I F L K

FIGURE 7

Fig.8.

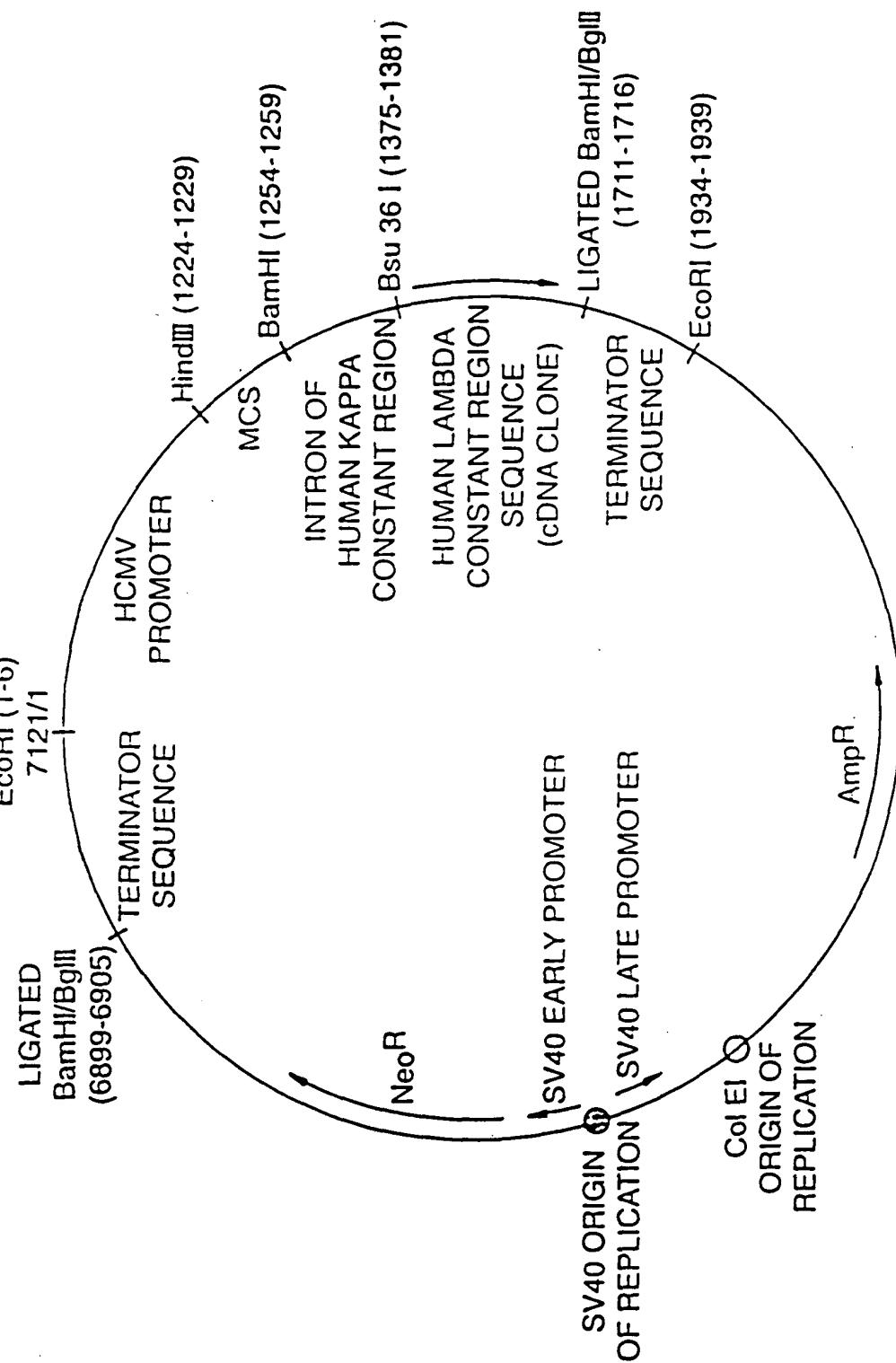


Fig. 9.

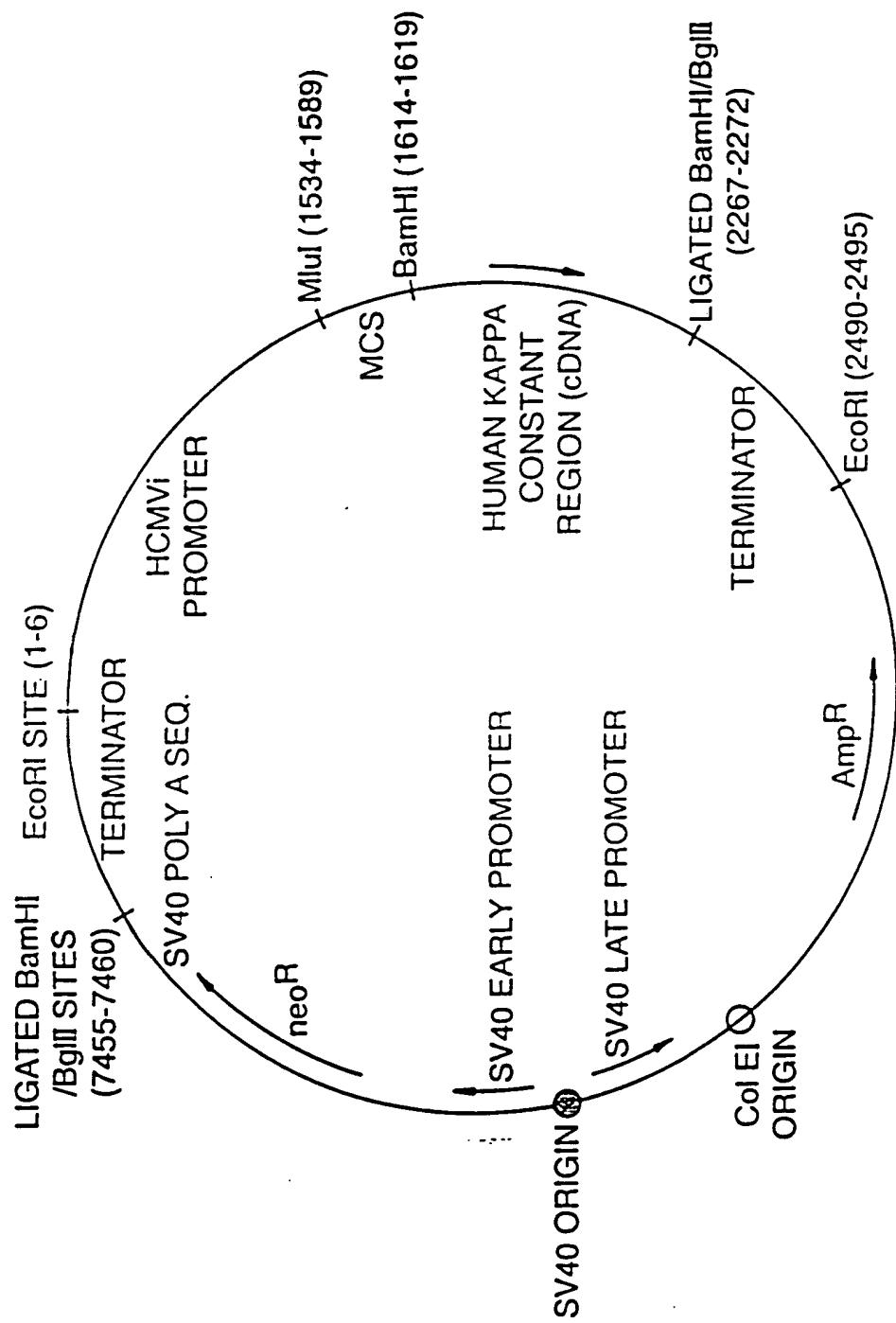


Fig.10.

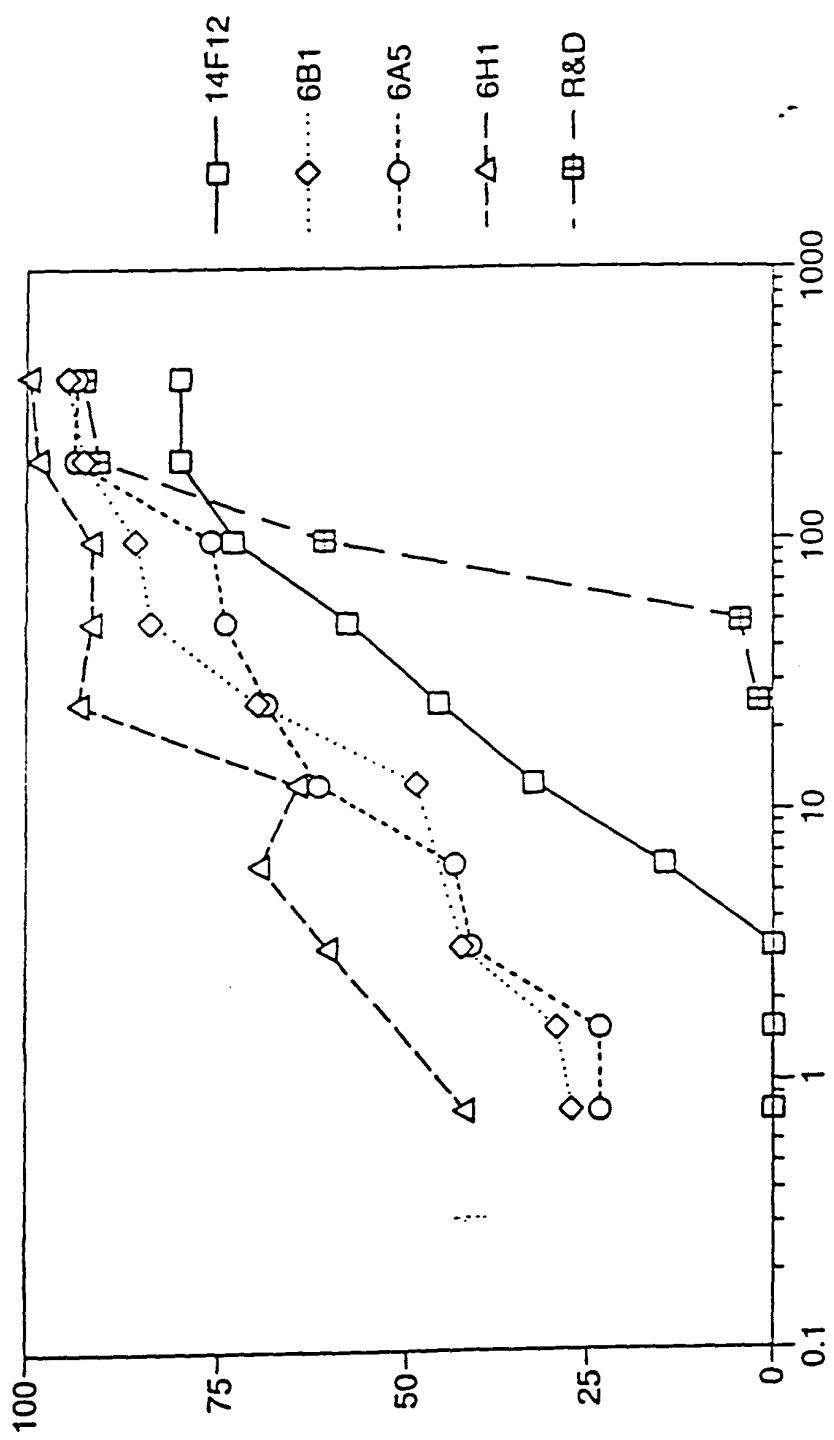


Fig.11.

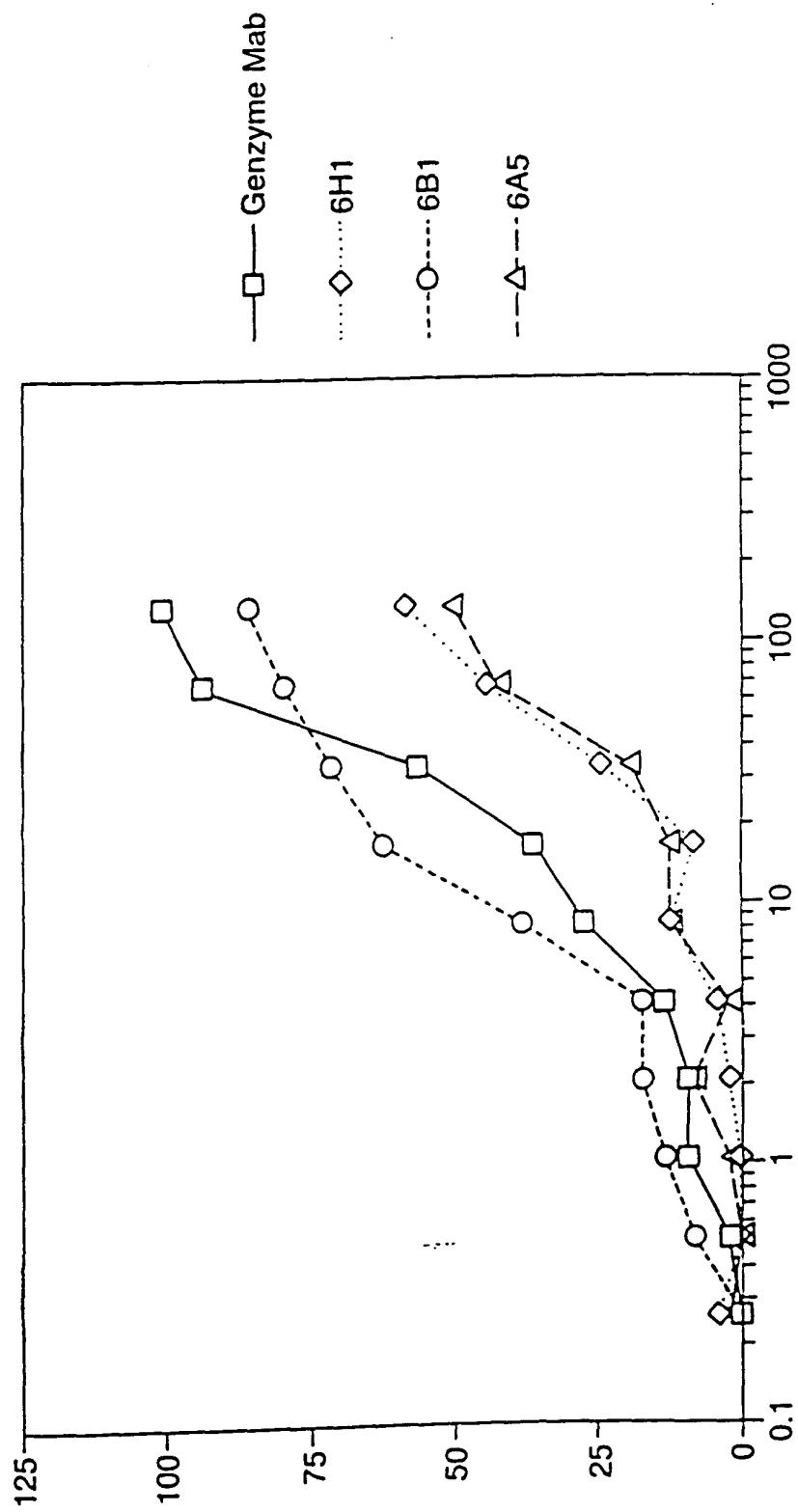


Fig.12.

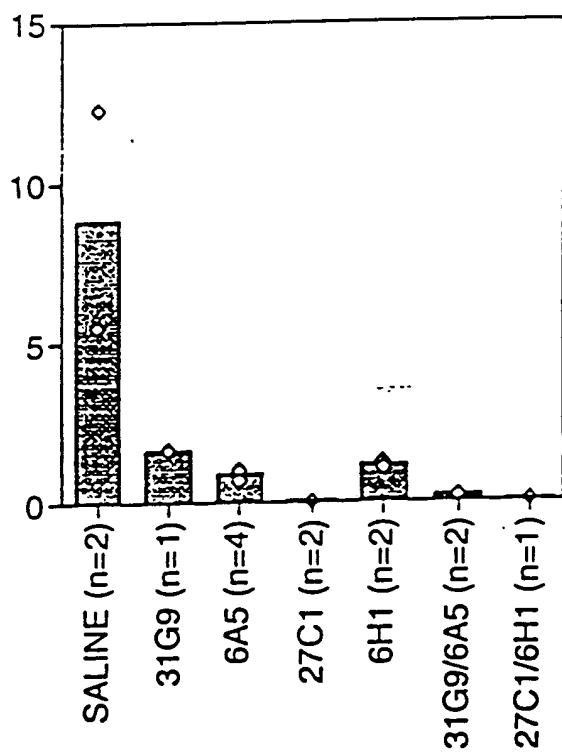
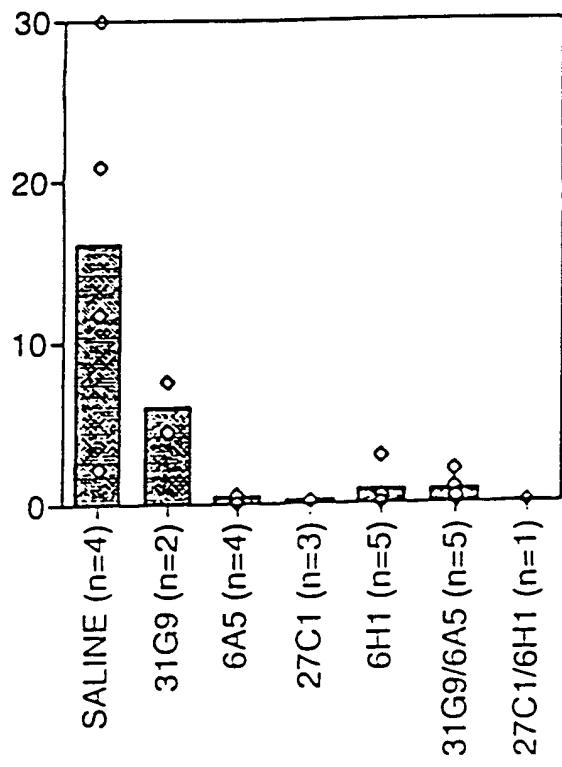


Fig.13(a).

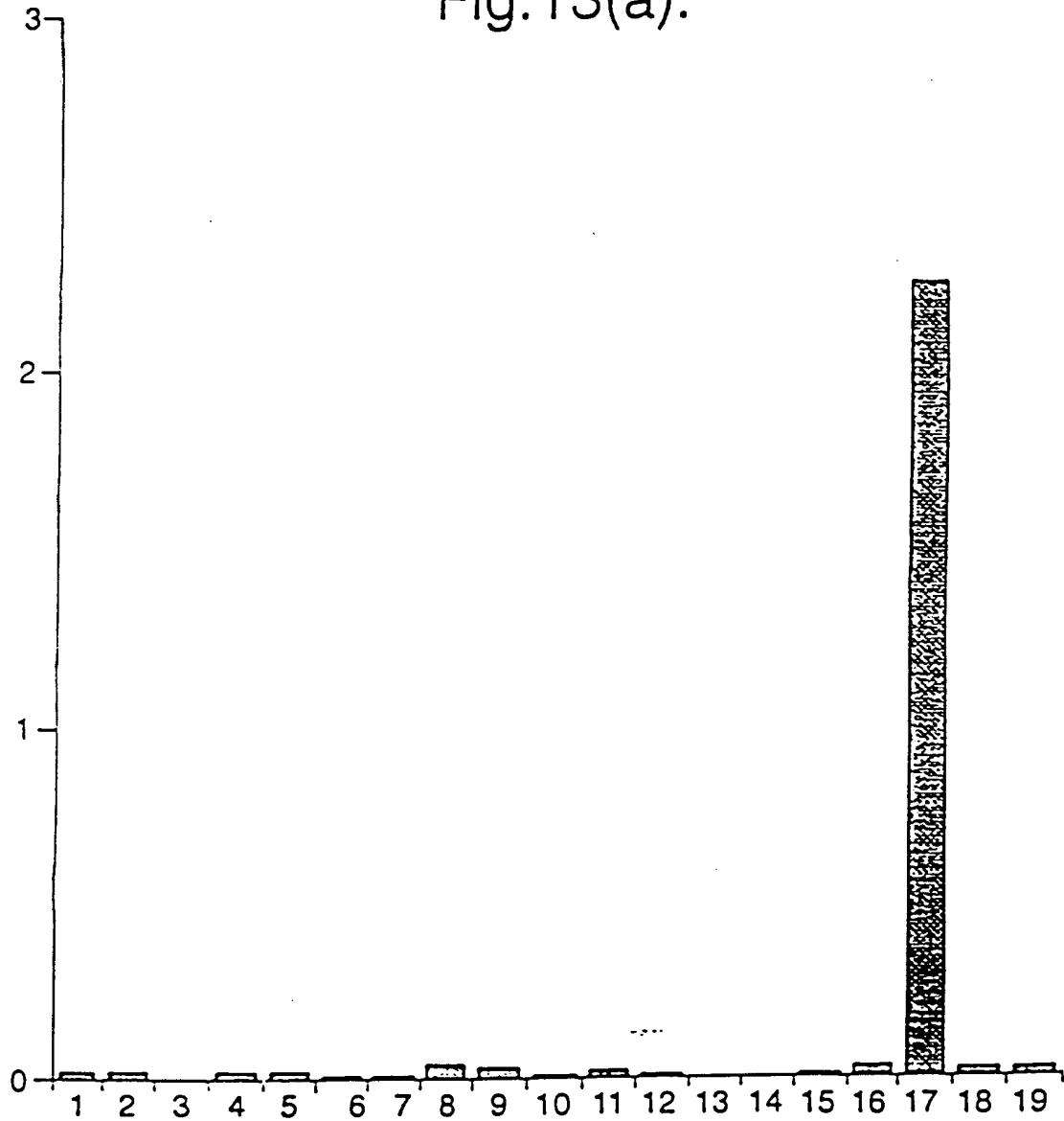


Fig.13(b).

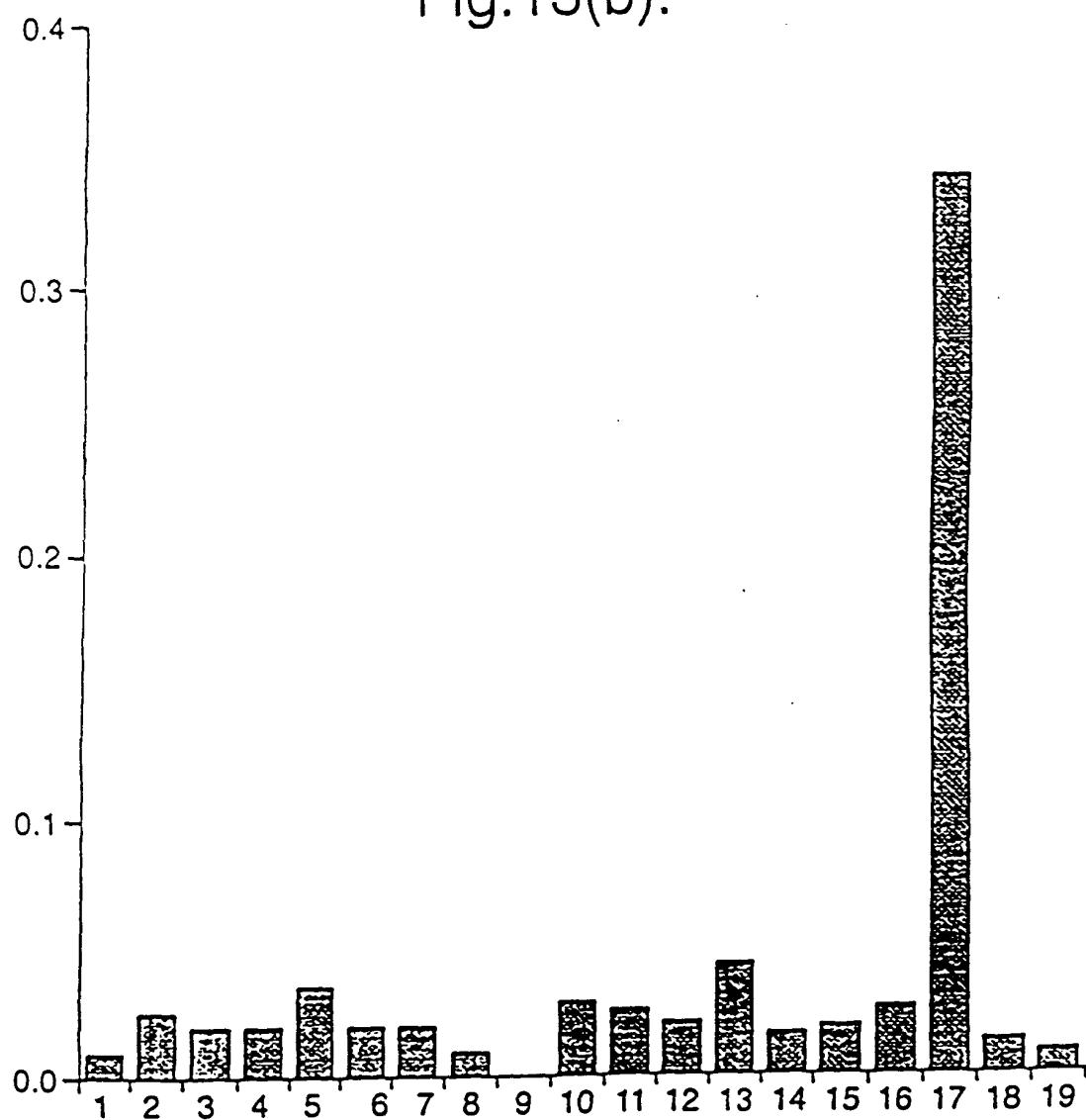


Figure 14

GAA ATT GTG CTG ACT CAG TCT CCA TCC CCT GCA TCT GTA GCA
 E I V L T Q S P S L S A S V G> 40
 50 GAC AGA GTC ACC ATC ACT TGC CGG GCA AGT CAG GGC ATT GGA GAT GAT
 D R V T I T C R A S Q G I G D D>
 100 TGC GCC TGG TAT CAG CAG MAG CCA GGG MAA GCC CCT ATC CTC CTG ATC
 L G W Y Q K P G K A P I L L I> 140
 150 TAT GGT ACA TCC ACT TTA CAA AGT GGG GTC CCG TCA AGG TTC AGC GGC
 Y G T S T L Q S G V P S R F S G> 190
 200 AGT GGA TCT GGC ACA GAT TTC ACT CTC ACC ATC AAC AGC CTG CAG CCT
 S G S G T D F T L T I N S L Q P>
 250 GAA GAT TTT GCA ACT TAT TAC TGT CTA CAA GAT TCC ATT TAC CCG CTC
 E D F A T Y Y C L Q D S N Y P L> 280
 290 ACT TTC GGC GGA GGG ACA CGA CTG GAG ATT AAA CGT (SEQ ID NO:58)
 T F G G G T R L E I K R> (SEQ ID NO:59)

Fig.15.

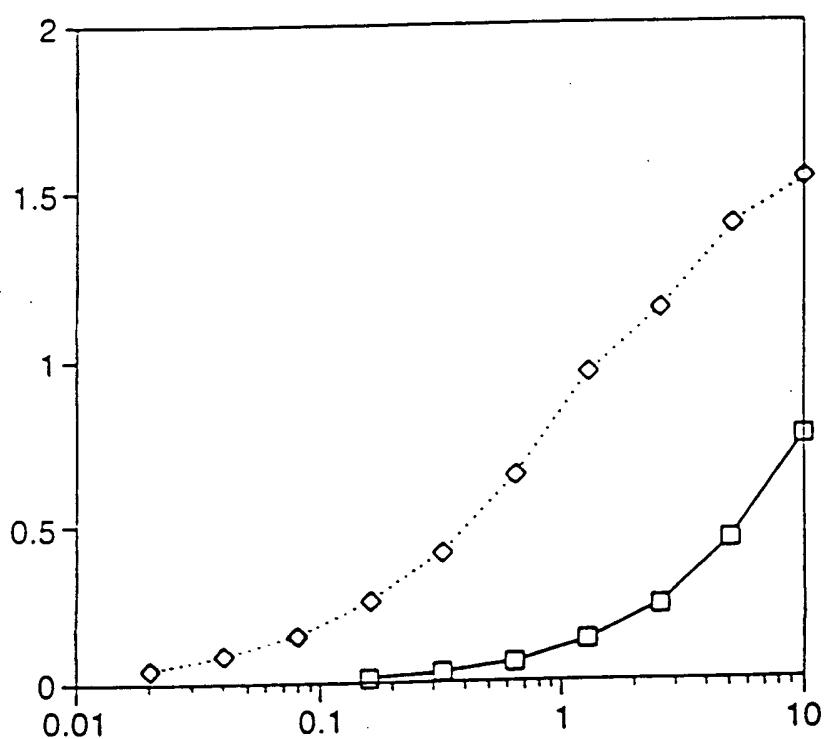


Fig.16.

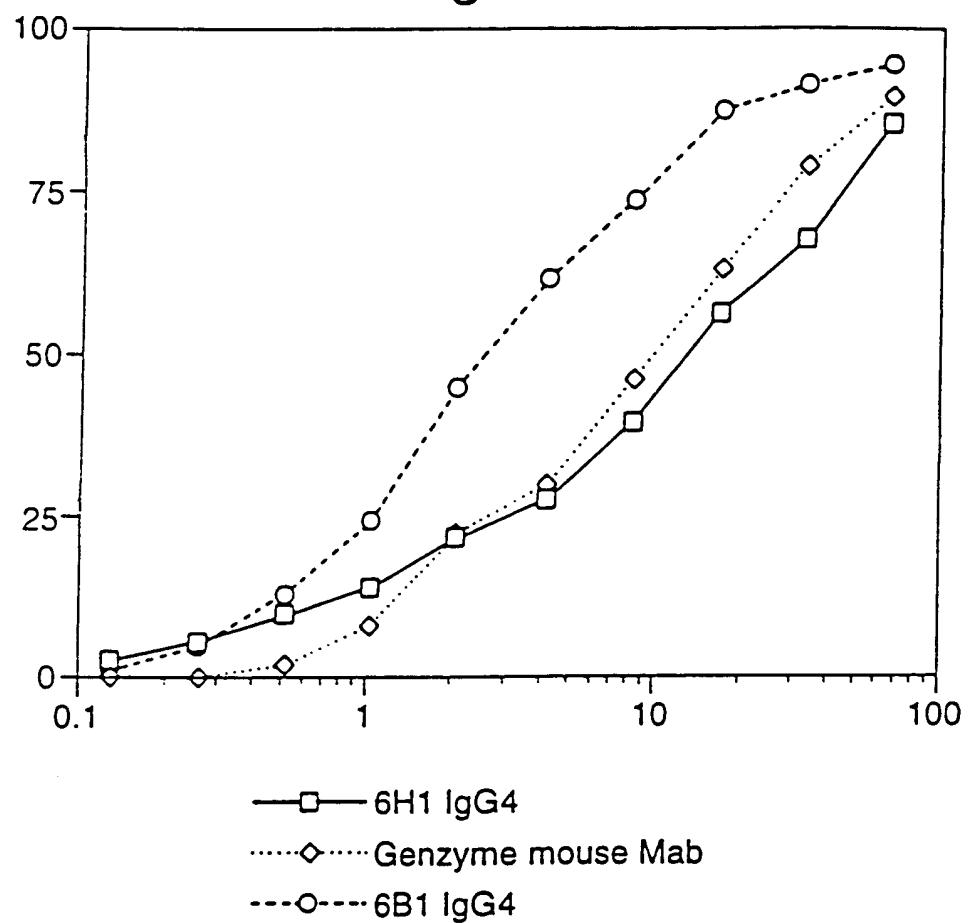


Fig.17.

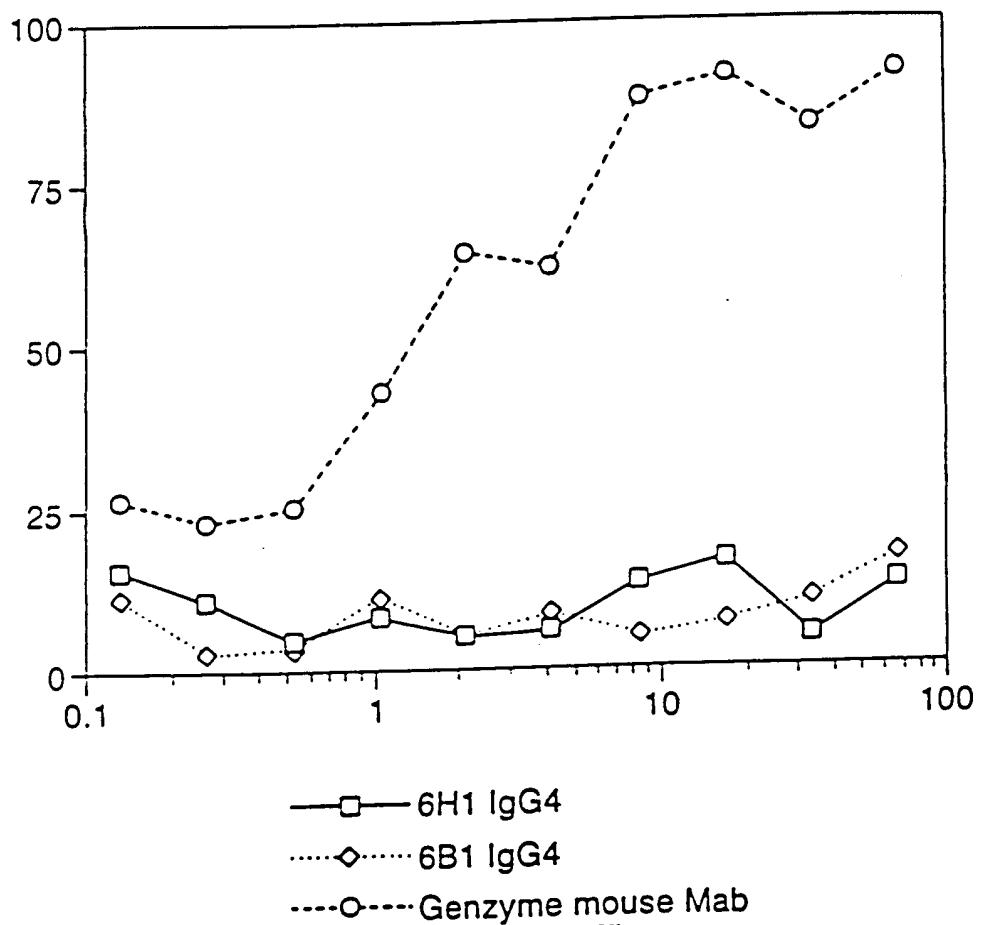


Fig.18.

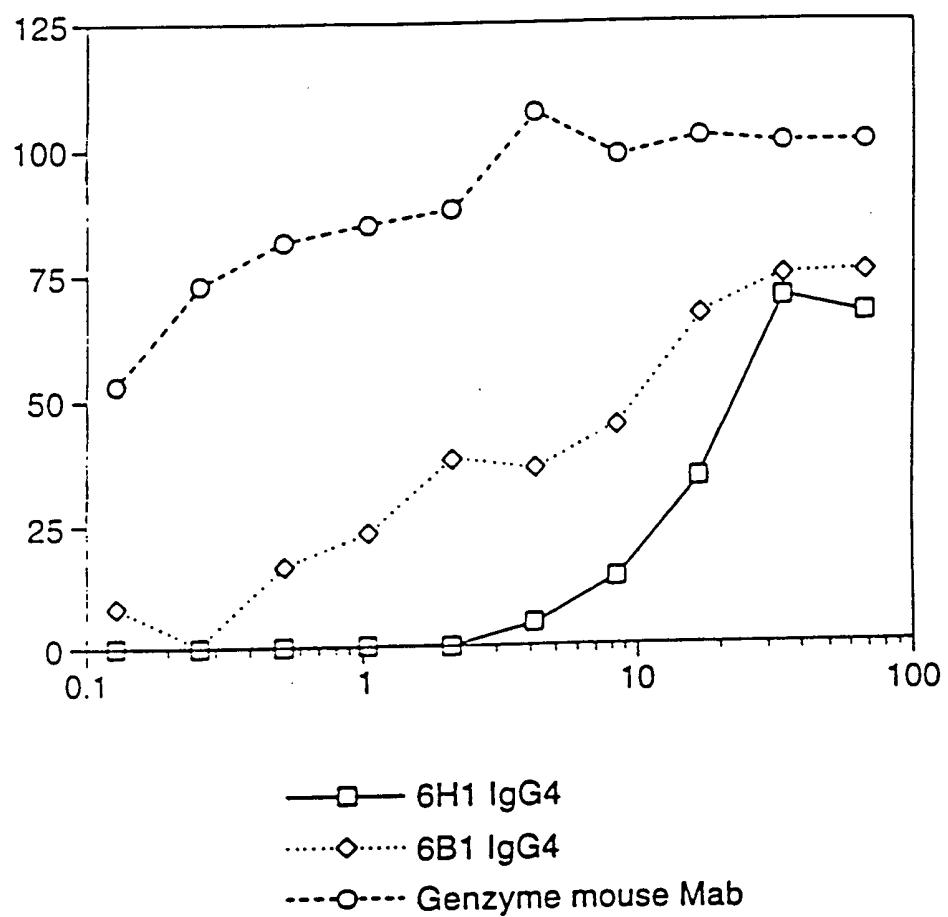


Figure 19

10 GAG GTG CAG CTG GTG GAG TCT GGG GCA 30 GTC GTC CAG CCT GGG AGG
 E V Q L V E S G G V V Q P G R>
 50 TCC CTG AGA CTC TCC TGT GCA GCG TCT GGA 70 80 90
 S L R L S C A A S G F T F S S Y>
 100 GGC ATG CAC TGG GTC CGC CAG GCT CCA GGC 110 120 130 140
 G M H W V R Q A P G K G L E W V>
 150 GCA GTT ATA TGG TAT GAT GCA AGT ATT AAA 160 170 180 190
 A V I W Y D G S N K Y Y A D S V>
 200 AGG GGC CGA TTC AGC ATC TCC AGA GCA ATT TCC AGC ATT GCA GAC TCC GTC
 K G R F T I S R D N S K H T I. Y>
 250 CTG CAA ATG GAC AGC CTG AGA GCC GAG AGC GGC GTC ATT TAC TGT
 L Q N D S L R A E D T A V Y Y C>
 290 GGA AGA ACG CTG GAG TCT AGT TGT TGG CCC CAA GGC ACC CTC GTC ACC
 G R T L E S S L W G Q G T L V T>
 340 GTC TCC TCA (SEQ ID NO:60)
 V S S (SEQ ID NO:61)

Figure 19 (ii)

10	TCG TCT GAG CTG ACT CAG GAC CCT GCT GTC TCT GTC GCC TCG CGA CAG	20	S. S E L T Q D P A V S V A L G Q >	30		40	
50	ACA GTC AGG ATC ACA TGC CAA GGA GAC AGC CTC AGC AGC TAT TAT GCA	60	T V R I T C Q G D S L R S Y . Y A >	70	80	90	
100	AGC TGC TAC CAG CAG AGC AGC CAA GGA CAG CCC CCT GTC AGC AGC TAT	110	S W Y Q Q R P G Q A P V L V I Y >	120	130	140	
150	GCT AAC AAC CGG CCC TCA GGC ATC CCA GAC CGA TTC TCT GCC TCC	160	C K N N R P S G I P D R F S G S >	170	180	190	
200	AGC TCA GGA AAC ACA GCT TCC TTC AGC ATC ATC AGC GCT CGG CGG GAA	210	S S G N T A S L T I T G A Q A E >	220	230	240	
250	GAT GAG GCT GAC TAT TAC TGT AAC TCC CGG GAC AGC AGT AGT ACC CAT	260	D E A D Y C N S R D S S T H >	270	280		
300	CGA GGC GTC TTC GGC GGA GGC AGC AGC CTG AGC GTC CTG GGT (SEQ ID NO:62)	310	R G V F G G T K L T V L G (SEQ ID NO:63)	320	330		

Figure 19 (iii)

10 TCG TCT GAG CTC ACT CAG GAC CCT CCT GCT GTC TCT GTC CCC TGT GGA CGA CAG
 S S E L T Q D P A V S V A L G Q>

 50 AGC GTC AGG ATC AGA TGC CAA GGA GAC AGC CTC AGC AGC TAT TAT TAT GCA
 T V R 1 T C Q G D S L R S Y Y A>

 100 AGC TGG TAC CAG CAG AGC CCA GGA CAG CCC CCT GTC CTT GTC ATC TAT
 S W Y Q Q K P G Q A P V L V I Y>

 150 CGT AGG AGC AGC CCC TCA GGG ATC CCA GAC CGA TTC GCT GGC TCC
 G K N R P S G I P D R F A G S>

 200 AGC TCA CGT AGC AGC GCT TCC TTC AGC ATC AGT GGG GCT CAG CGG GAG
 N S G N T A S L T I T G A Q A E>

 250 GAT GAG GCT GAC TAT TAC TGT AGC TCC CGG GAC AGC AGC ATC GGT AAC CAT
 D E A D Y Y C S S R D S S G N H>

 290 GTC GTT TTC GGC GGA GGG AGC AGC CTC AGC AGC TAT GGT (SEQ ID NO:64)
 V V F G G G T K L T V L G (SEQ ID NO:65)

Figure 19(iv)

10 GAT GTT GTG ATG ACT CAG TCT CCA TCC TCC CTG TCT GCA TCT GAA
 D V M T Q S P S L S A S V G>
 20
 50 GAC AGA GTC ACC ATC ACT TGC CGG CCC AGT CAG GGC ATT AGC ATT TAT
 D R V T I T C R A S Q G I S N Y>
 60
 100 TTA GGC TGG TAT CAG CAA AAA CCA GGG AAA GCC CCT AGG CTC CTG ATC
 L A W Y Q K P G K A P K L L I>
 110
 150 TAT AGG GCA TCT ACT TTA GAA AGT GGG GTC CCA TCA AGG TTC AGT GGC
 Y K A S T L E S G V P S R P S G>
 160
 200 AGT GGA TCT GGG AGA GAA TTC ACT CTC ACA ATC AGC AGT CTC CAA CCT
 S G S G T E F T L T I S S L Q P>
 170
 210
 220
 230
 240
 250
 260
 270
 280
 290
 300
 310
 320

GAA GAT TTT GCA AGT TAC TAC TGT CAA CAG AGT TAC AGT AGC CCT CGA
 E D F A T Y Y C Q Q S Y S T P R>
 ACG TTC CGC CAA GCG AGC AAA CTG GAT ATC AAA CGT (SEQ ID NO:66)
 T F G Q G T K V D I K R (SEQ ID NO:67)

Fig.20.

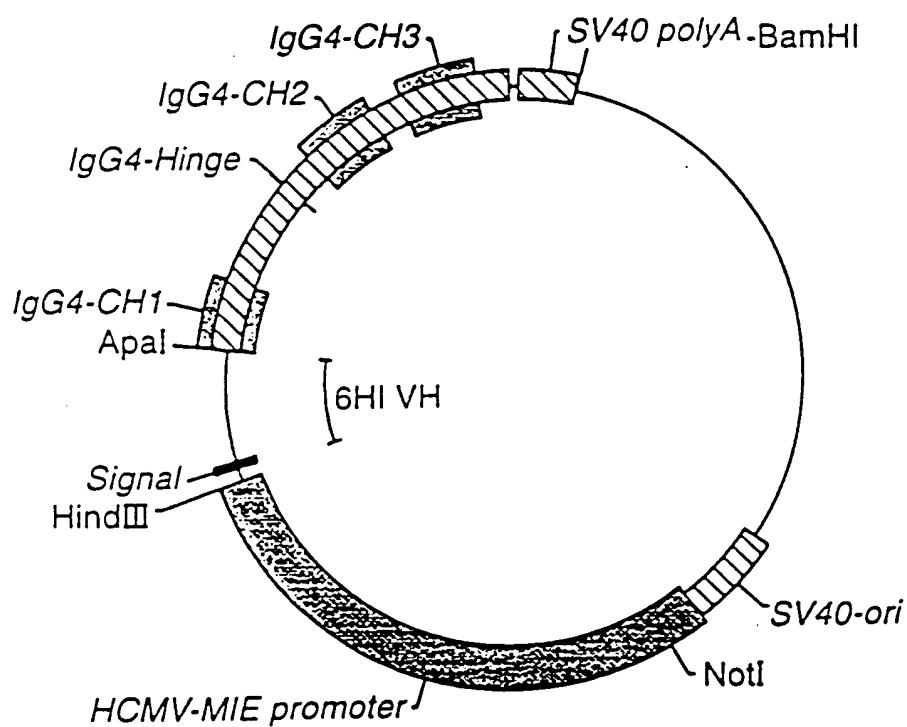


Fig.21.

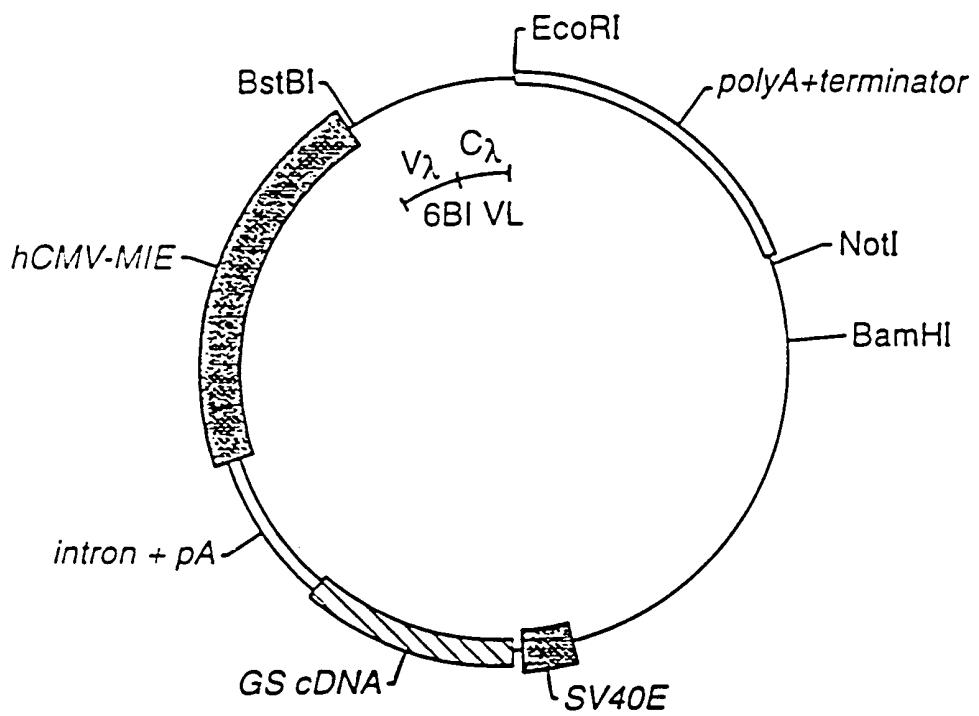


Fig.22.

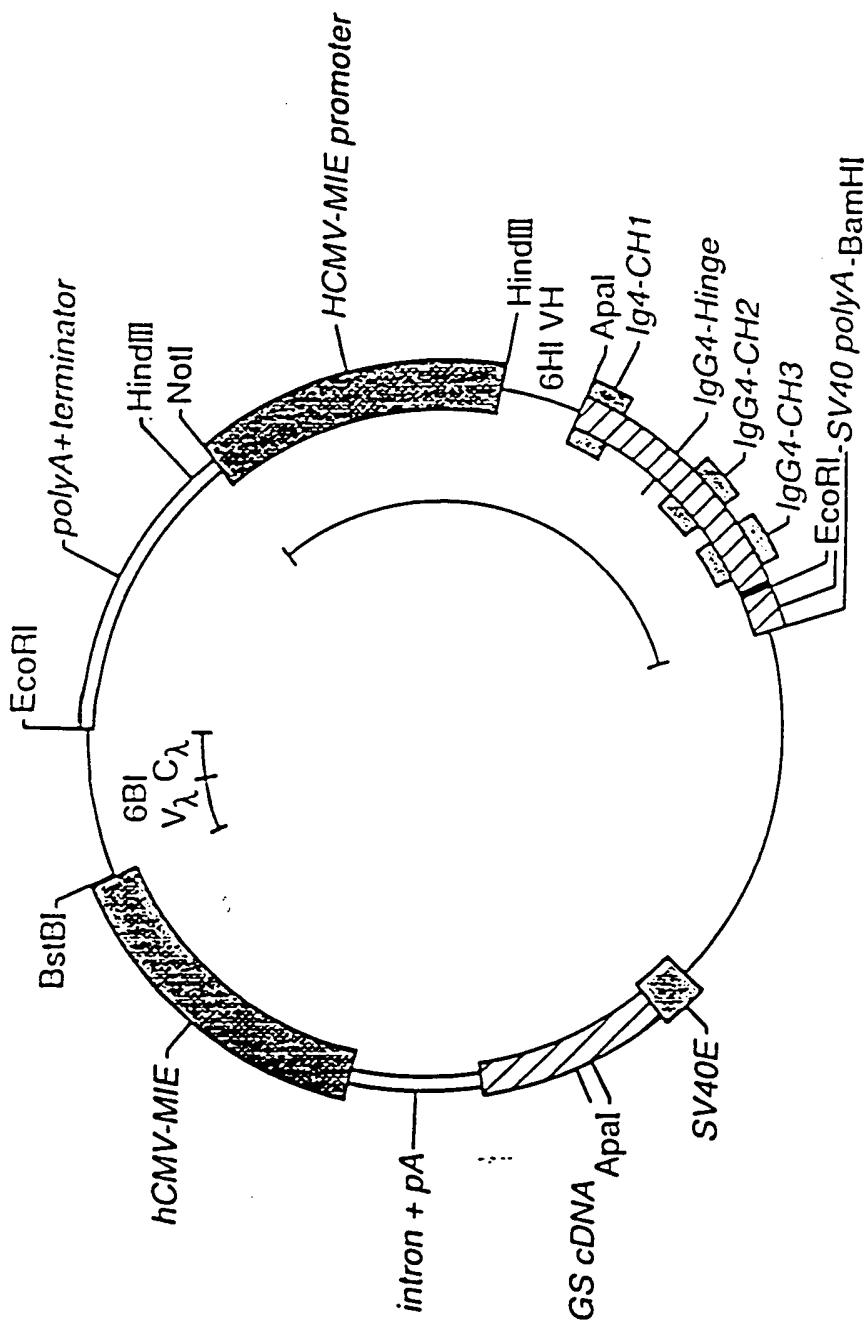
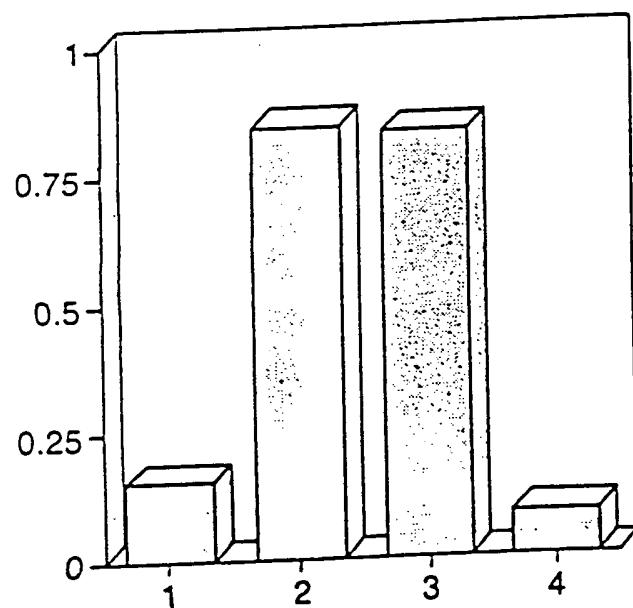


Fig.23.



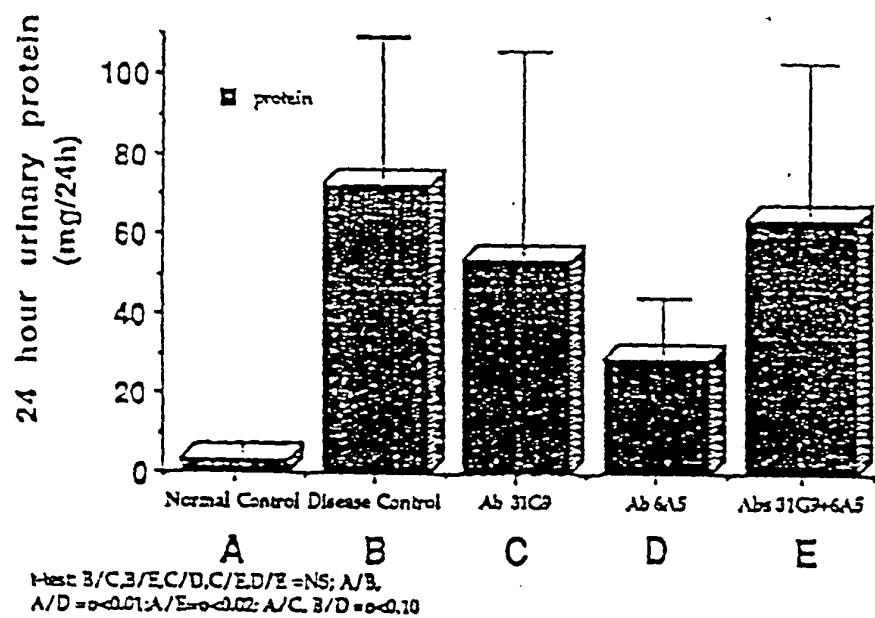


FIGURE 24

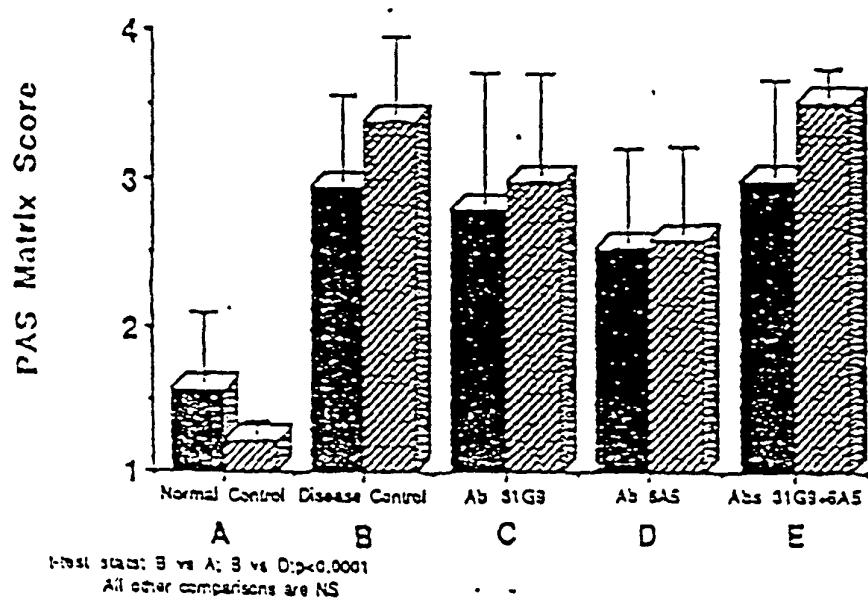


FIGURE 25